

CLAIMS

What is claimed is:

1. An all-wheel drive electric vehicle that runs on a road and on an electrified track, comprising:
 - a chassis including a driving wheel,
 - two front wheels on opposite ends of a front axle, a front differential positioned on the front axle and a front drive shaft connected to the front differential,
 - two rear wheels on opposite ends of a rear axle, a rear differential positioned on the rear axle and a rear drive shaft connected to the rear differential,
 - a transfer case for transmitting rotary motion to the front and rear drive shafts,
 - an electric motor,
 - a battery pack and a battery switch for turning the battery pack on or off,
 - a transmission connected to the electric motor,
 - a foot powered accelerator connected to the electric motor that controls an amount of electricity that travels to the electric motor,
 - an alternator for generating electric power to operate accessories in the electric vehicle,
 - an auxiliary generator capable, once the electric vehicle attains a speed of approximately 20 m.p.h., of charging the battery pack when the battery pack has been turned off and of assisting the battery pack when the battery pack is turned on, by transmitting electricity to the electric motor for extra power,

an electrical system for conveying electrical energy from the battery pack to the electric motor and for conveying electrical energy from the auxiliary generator to the electric motor and the battery pack, the electrical system including a voltage regulator for regulating the voltage output of the auxiliary generator,

a pair of legs, each of the legs having a motor associated with the leg and having a balled foot, the legs capable of being lowered so as to make contact with the electrified track and complete an electric circuit that allows the electric track to supply electric power to drive the electric motor when an output from the battery pack has been turned off, and

a cooling system for cooling the motor, the cooling system including a cooling tank.

2. The electric vehicle of claim 1, wherein the cooling tank contains oil that is pumped and circulated through oil piping.

3. The electric vehicle of claim 1, including a portable charger for charging the batteries when the vehicle is not in use.

4. A rear wheel drive electric vehicle that runs on a road and on an electrified track, comprising:

a chassis including a driving wheel,

two front wheels on opposite ends of a front axle,

two rear wheels on opposite ends of a rear axle, a rear differential positioned on the rear axle and a rear drive shaft connected to the rear differential,

an electric motor,
a battery pack and a battery switch for turning the battery pack on or off,
a transmission connected to the electric motor,
a foot powered accelerator connected to the electric motor that controls an amount of electricity that travels to the electric motor,
an alternator for generating electric power to operate accessories in the electric vehicle,
an auxiliary generator capable, once the electric vehicle attains a speed of approximately 20 m.p.h., of charging the battery pack when the battery pack has been turned off and of assisting the battery pack when the battery pack is turned on, by transmitting electricity to the electric motor for extra power,
an electrical system for conveying electrical energy from the battery pack to the electric motor and for conveying electrical energy from the auxiliary generator to the electric motor and the battery pack, the electrical system including a voltage regulator for regulating the voltage output of the auxiliary generator,
a pair of legs, each of the legs having a motor associated with the leg and having a balled foot, the legs capable of being lowered so as to make contact with the electrified track and complete an electric circuit that allows the electric track to supply electric power to drive the electric motor when an output from the battery pack has been turned off, and
a cooling system for cooling the motor, the cooling system including a cooling tank

5. The electric vehicle of claim 4, wherein the cooling tank contains oil that is pumped and circulated through oil piping.

6. The electric vehicle of claim 4, including a portable charger for charging the batteries when the vehicle is not in use.